

REMARKS

Claims 32 and 34-40 are pending in this application. Claims 32, 34, and 36-40 have been amended to define more clearly what Applicant regards as the invention. Claims 32 and 36-40 are in independent form. Favorable reconsideration is requested.

Claims 32 and 34-40 were rejected under 35 U.S.C. § 103(a) as being obvious from U.S. Patent 5,414,780 to *Carnahan* in view of in view of U.S. Patent No. 6,570,667 to *Hattori* and further in view of U.S. Patent No. 5,684,865 to *Mohtashemi*.

The present invention is intended to easily add transmission information for a page header or page footer to a transmitted JPEG image in a color facsimile apparatus transmitting a color image.

Claim 32 is directed to a color facsimile apparatus including reading means, generating means, buffering means, extracting means, overwriting means, compressing means, storing means, and transmitting means. The reading means reads an image, the generating means generates image data representing the image, and the buffering means stores the image data generated by the generating means in a buffer. The extracting means sequentially extracts, as a minimum coded unit for JPEG compression processing, image data from the buffer before the buffer is filled with the image data generated by the generating means.

The overwriting means overwrites transmission information of image data for a page header or page footer in the unit of extracted image data extracted by the extracting means when the unit of the extracted image data is a unit of the extracted image data corresponding to a header portion or footer portion in the image. The compressing means sequentially executes JPEG compression processing for each unit of the extracted

image data including the unit of the extracted image data in which the transmission information is overwritten. The storing means stores compressed data by the compressing means in a memory, and the transmitting means transmits a JPEG image data based on the compressed data stored in the memory. The JPEG image data includes the compressed data of the transmission information.

Among other notable features of the present invention is overwriting transmission information of image data for a page header or page footer in a unit of extracted image data corresponding to a head portion or foot portion in a original image. Thus, original image data is partially replaced with the transmission information.

The unit is a minimum coded unit (MCU) for JPEG compression processing. JPEG compression is executed for each unit of extracted image data including a unit in which the transmission information is overwritten, and the compressed data is transmitted.

In general, a facsimile apparatus executes compression scanned image data before transmitting. For the compression, all of the scanned image data is stored in a buffer once. However, the data volume of a color image can be large. A buffer which can store all of the scanned image data can be expensive. Therefore, in a color facsimile apparatus, image data stored in a buffer is sequentially compressed before the buffer is filled with scanned image data.

Claim 32 relates to such a color facsimile apparatus. In Claim 32, image data sequentially extracted from a buffer is processed by a MCU, as explained above. JPEG compression for each MCU is executed after the overwriting. Therefore, by virtue of the features of Claim 32, it is not necessary to execute JPEG compression twice for adding transmission information.

The Examiner concedes, at page 3 of the Office Action, that *Carnahan* does not teach “overwriting means for overwriting transmission information of image data for a page header or page footer in a unit of extracted data extracted by said extracting means when the unit of the extracted data is a unit in which the transmission information should be overwritten...” The Examiner asserts that *Hattori* teaches this feature, and cites col.19, lines 38-56; col.24, lines 1-15; col.25, lines 2-57; and col.39 line33, to col.40, line 28 of that patent.

Carnahan, as understood by Applicant, relates to a method and apparatus relating to image compression. In order to solve a problem in a method of transforming an image data into a pyramidal image representation, *Carnahan* discusses transforming image data by recursively interleaving the image data to generate blocks of component image coefficients having a form suitable for subsequent quantization, motion estimation, and coding.

However, nothing in *Carnahan* would teach or suggest setting each unit of pixel data for JPEG processing as the MCU for adding a header or footer to color facsimile data with compression.

Nothing in *Carnahan* would teach or suggest extracting, as a minimum coded unit for JPEG compression processing, image data from a buffer before the buffer is filled with generated image data, and overwriting transmission information of image data for a page header or page footer in the unit of extracted image data when the unit of the extracted image data is a unit of the extracted image data corresponding to a header portion or footer portion in the image, as recited in Claim 32.

Hattori does not teach or suggest the “overwriting means” of Claim 32.

Hattori, as understood by Applicant, relates to a system comprising personal computers 11 to 13 and a color printer 30 connected each other via LAN 1 (see Fig. 1). The printer 30 is also connected to a telephone network 5. The printer 30 can be used as a printer and a facsimile apparatus.

The cited portion at col. 19, lines 38-56 of *Hattori* is understood to relate to log information of a fax communication. The log information is a communication report periodically printed out by the printer 30 as a facsimile apparatus. This does not teach or suggest the “overwriting means” of Claim 32.

The cited portion at col. 24, lines 1-15, and col. 25, lines 2-57 of *Hattori* are understood to relate to a communication between the PCs 11 to 13 and the printer 30 for using the printer 30 as a facsimile apparatus. The PC transmits to the color printer 30 fax transmission data, distinction data, a telephone number, and transmission source information. The fax transmission data is image data converted from text data drafted on the PC. The distinction data indicates that the fax transmission data is not for the printer function of the printer 30 but for the facsimile function of the printer 30. The telephone number is a facsimile number of a receiving side. The transmission source information is information with regard to a transmitting side and thus a user of the PC and the printer 30.

The transmission source may be appended to the fax transmission data. However, *Hattori* does not teach or suggest overwriting the transmission source in the fax transmission data.

The cited portion at col. 39, line 33, to col. 40, line 28 of *Hattori* is understood to relate to a communication between the PCs 11 to 13 and the printer 30 for using the printer 30 as a facsimile apparatus, and a transmission of main page data and cover

page data. The main page data and cover page data are G3 compressed type fax data formed by the PC. Nothing in this portion (or indeed any other portion) of *Hattori* would teach or suggest the “overwriting means” of Claim 32.

Mohtashemi, as understood by Applicant, relates to facsimile communication with selective call receivers, but does not relate to a color facsimile apparatus, and does not supply what is missing from *Carnahan* and *Hattori*.

Nothing in *Carnahan*, *Hattori*, and *Mohtashemi*, whether considered either separately or in any permissible combination (if any) would teach or suggest extracting, as a minimum coded unit for JPEG compression processing, image data from a buffer before the buffer is filled with generated image data, and overwriting transmission information of image data for a page header or page footer in the unit of extracted image data when the unit of the extracted image data is a unit of the extracted image data corresponding to a header portion or footer portion in the image, as recited in Claim 32.

Accordingly, Claim 32 is seen to be clearly allowable over *Carnahan*, *Hattori*, and *Mohtashemi*, whether considered either separately or in any permissible combination (if any).

Independent Claims 36-40 recite features similar in many relevant respects to those discussed above with respect to Claim 32 and therefore are also believed to be patentable over *Carnahan*, *Hattori*, and *Mohtashemi* for at least the reasons discussed above.

A review of the other art of record has failed to reveal anything which, in Applicant’s opinion, would remedy the deficiencies of the art discussed above, as references

against the independent claims herein. Those claims are therefore believed patentable over the art of record.

The other claims in this application are each dependent from Claim 32 discussed above and are therefore believed patentable for the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual reconsideration of the patentability of each on its own merits is respectfully requested.

This Amendment After Final Action is believed clearly to place this application in condition for allowance and its entry is therefore believed proper under 37 C.F.R. § 1.116. Accordingly, entry of this Amendment After Final Action, as an earnest effort to advance prosecution and reduce the number of issues, is respectfully requested. Should the Examiner believe that issues remain outstanding, the Examiner is respectfully requested to contact Applicant's undersigned attorney in an effort to resolve such issues and advance the case to issue.

In view of the foregoing amendments and remarks, Applicant respectfully requests favorable reconsideration and early passage to issue of the present application.

Applicant's undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our below listed address.

Respectfully submitted,

/Raymond A. DiPerna/

Raymond A. DiPerna

Attorney for Applicant

Registration No.: 44,063

FITZPATRICK, CELLA, HARPER & SCINTO
30 Rockefeller Plaza
New York, New York 10112-3801
Facsimile: (212) 218-2200

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